Amendments to the Specification

Please replace paragraph [0045] with the following amended paragraph:

[0045] As an alternative to, or in addition to, processing the reagent quality signal, RQ, produced by the reagent quality sensor 70 described hereinabove, the reagent quality monitoring logic block 90A may include a reagent quality virtual sensor block 118, as illustrated in phantom in FIG. 4, that is configured to determine a reagent quality value, corresponding to the quality of the reagent solution contained in the reagent holding tank 28 (or 28'), as a function of one or more operating conditions other than the reagent quality signal produced by the reagent quality sensor 70. Such a reagent quality virtual sensor block 118 may include one or more software algorithms configured to estimate reagent quality, RQ, as a function of one or more engine, air handling system and/or reagent handling system operating parameters. An example of one such algorithm configured to estimate the reagent quality, RQ, as a function of normalized reagent solution flow rate and normalized NOx flow rate from the engine is described in U.S. Patent No. 7,067,319~~co-pending U.S. Patent Application Ser. No. _____, entitled SYSTEM FOR MONITORING REAGENT SOLUTION QUALITY AND TRACKING CATALYST DEGRADATION~~, which is assigned to the assignee of the present invention, and the disclosure of which is incorporated herein by reference. Those skilled in the art will recognize that the reagent quality virtual sensor block 118 may alternatively or additionally include one or more other known software algorithms configured to estimate a reagent quality value as a function of one or more engine, air handling system and/or reagent handling system operating conditions, and any such other known software algorithms are intended to fall within the scope of the claims appended hereto. In any case, it will be understood that any such reagent quality value produced by the reagent quality virtual sensor block 118 may be processed by the filter blocks 100 and 110 instead of, or in addition to, the reagent quality signal, RQ, produced by the reagent quality sensor 70. In embodiments of the reagent quality monitoring logic block 90A that include or receive more than one such reagent quality value, suitable modifications may be made to block 90A to include additional logic

structures for processing the additional reagent quality values and recognizing additional fault values. Any such modifications would be a mechanical step for a skilled artisan.